

**BY ORDER OF THE CHIEF,  
NATIONAL GUARD BUREAU**

**MANPOWER STANDARD 38B1CB**

**14 MARCH 2005**



***Manpower Standard***

**COMBAT COMMUNICATIONS SQUADRON (CBCS)  
SUPPORT FLIGHT**

**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

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This Air National Guard Manpower Standard (ANGMS) quantifies the manpower required to accomplish the tasks described in the process oriented description (POD) for varying levels of workload in the Combat Communications Squadron (CBCS) Support Flight function whose mission is to provide an integrated, year-round, realistic training environment (airspace, facilities, equipment) for units to enhance their combat capability and readiness. The Air National Guard (ANG) is the authority for the approval and publication of ANG Manpower Standards. Air Force (AF) and ANG directives contain policy and procedural guidance for the operation of the CBCS Support Flight function. This standard applies to all ANG Combat Communications Squadrons with the exception of 114CBCS, 222CBCS, 224CBCS, 234CBCS, 244CBCS, and the 290CBCS. This standard does not apply to Combat Communications Groups. This standard does not apply to Combat Readiness Training Centers (CRTCs). . This standard is applicable to peacetime operations only. This standard was developed in accordance with AF Instruction (AFI) 38-201, *Determining Manpower Requirements*, and AF Manual (AFMAN) 38-208, Volume 1, *Air Force Management Engineering Program (MEP) - Processes*, and AFMAN 38-208, Volume 2, *Air Force Management Engineering Program (MEP) - Quantification Tools*. Send comments and suggested improvements on AF IMT 847, *Recommendation for Change of Publication*, through channels, to ANG, Management Engineering Branch (ANG/XPME / Operating Location TN [OLTN]), 3000 Handly Avenue, McGhee Tyson ANG Base TN 37777-6283.

### ***SUMMARY OF REVISIONS***

This document is substantially revised and must be completely reviewed.

## 1. STANDARD DATA.

1.1. Approval Date: 14 March 2005.

1.2. Man-hour Data Source: The Operational Audit (historical record/technical estimate) technique was used to collect/determine man-hour data.

1.3. Man-hour Equation:  $Y = 423.21 + 1.158X$ .

1.4. Workload Factor (WLF).

1.4.1. Title: A Military Authorization Supported.

1.4.2. Definition: The average monthly number of military authorizations supported.

1.4.3. Source: Unit Manpower Document (UMD) (34 Command File Part B) maintained by ANG Full Time Requirements (ANG/XPMR).

1.4.4. Points of Contact.

1.4.4.1. Functional: Lt Col James S. Hutchinson and Maj William Stegemerten, ANG/C4CC

1.4.4.2. Manpower: Maj Brian Cotton, ANG/XPME/OLTN

## 2. APPLICATION INSTRUCTIONS.

2.1. Step 1. Man-hour Equation. Apply the man-hour equation in Paragraph 1.3., to determine required man-hours.

2.2. Step 2. Man-hour Availability Factor (MAF). Divide the resulting man-hours by the appropriate MAF (times the overload factor). Round the fractional manpower up to the next whole number.

2.3. Step 3. Upper and Lower Extrapolation Limits:

2.3.1.  $Y_U = 714.32$

2.3.2.  $Y_L = 424.25$

2.4. Step 4. Air Force Specialty Codes (AFSC) Requirement. Use the Manpower Table at Attachment 3 to determine required AFSC.

**3. STATEMENT OF CONDITIONS.** The normal hours of operation for this function are 80 hours per two-week period. Units work numerous schedules, from the normal 40 hours per week to alternate work schedules ranging from four ten-hour days per week to eight nine-hour days and one eight-hour day per two-week period. There are no other standard of living constraints that impact the daily operation of this work center.

DANIEL JAMES III, Lieutenant General, USAF  
Director, Air National Guard

**Attachment 1****GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION***References*

AFI 38-201, *Determining Manpower Requirements*

AFMAN 38-208, Volume 1, *Air Force Management Engineering Program (MEP) - Processes*

AFMAN 38-208, Volume 2, *Air Force Management Engineering Program (MEP) - Quantification Tools.*

*Abbreviations and Acronyms*

**ADPE** - Automated Data Processing Equipment

**AF** - Air Force

**AFEKMS** - Air Force Electronic Key Management System

**AFSC** - Air Force Specialty Codes

**ANG** - Air National Guard

**ANGMS** - Air National Guard Manpower Standard

**BAM** - Basic Access Module

**CA/CRL** - Custodian Authorization/Custody Receipt Listing

**CBCS** - Combat Communications Squadron

**CBT** - Computer Based Training

**CCSD** - Communication Service Designators

**CDI** - Conditioned Diphas

**CISO** - Computer Information System Company

**CIK** - Crypto Ignition Key

**CIM** - Crypto Interface Module

**CM** - Crypto Module

**COMPUSEC** - Computer Security

**COMSEC** - Communications Security

**CON** - Certificate of Net worthiness, or Console, Condition, Control

**COTS** - Commercial off the Shelf

**DCS** - Defense Communication System

**DISA** - Defense Information Systems Agency

**DMS** - Defense Messaging System

**DNS** - Domain Naming Servers

**DSG** - Drill Status Guardsman

**EAPS**- Emergency Action Procedures

**ESD** - Educational Services Division

**FAC** - Functional Account Code

**FLT** - Flight

**GMF** - Ground Mobile Forces

**HF** - High Frequency

**HP** - Hand Phone

**LVM** - Large Voice Module

**MAF** - Man-hour Availability Factor

**MEP** - Management Engineering Program

**MRSP** - Mobile Readiness Spares Packages

**NRZ** - Non-Return-to Zero

**PKI** - Public Key Infrastructure

**PM** - Preventive Maintenance

**POD** - Process Oriented Description

**RDM** - Red Data Module

**RHM** - Red Hub Module

**RRM** - Red Router Module

**SATE** - Security Awareness Training and Education

**SHF** - Super High Frequency

**STE** - Secure Telephone Equipment

**STU** - Secure Telephone Unit

**SYSCON** - Systems Control

**TDC** - Theater Deployable Communications

**TDP** - Technical Data Package

**TDY** - Temporary Duty

**TPAP** - Telecommunication Monitoring and Assessment Program

**UDCC** - Unit Deployment Control Center

**UHF** - Ultra High Frequency

**UMD** - Unit Manpower Document

**UTA** - Unit Training Assembly

**UTC** - Unit Type Code

**WLF** - Workload Factor

### *Terms*

**Air National Guard Manpower Standard (ANGMS).** A numbered, specialized publication that quantifies manpower requirements for a work center. Also includes approved variances. See AFI 38-201.

**Man-hour.** A unit of measuring work. It is equivalent to one person working at a normal pace for 60 minutes, two people working at a normal pace for 30 minutes, or a similar combination of people working at a normal pace for a period of time equal to 60 minutes.

**Manpower Standard.** The basic tool used to determine the minimum level of manpower required to support a function. It is a quantitative expression that represents a work center's man-hour requirements in response to varying levels of workload.

**Process Oriented Description.** A format that shows work center responsibilities structured for easy measurement of work categories, tasks and subtasks.

## Attachment 2

**PROCESS ORIENTED DESCRIPTION  
MISSION SUPPORT FLIGHT**

**A2.1. Listing of Functional Processes.**

<b>TASK NO.</b>	<b>PROCESS</b>
1.	SUPERVISION:
1.1.	ADMINISTERS PERSONNEL.
1.2.	RATES PERFORMANCE.
1.3.	NOMINATES PERSONNEL FORM AWARDS.
1.4.	DEVELOPS POLICY AND PROCEDURE.
1.5.	INFORMS PERSONNEL.
1.6.	REVIEWS DISTRIBUTION.
1.7.	ATTENDS WEEKLY STAFF MEETING.
1.8.	ATTENDS MONTHLY PRE-UNIT TRAINING ASSEMBLY MEETING.
1.9.	RECEIVES AND ESCORTS OFFICIAL VISITORS.
2.	COMPUTER BASED TRAINING (CBT) FLIGHT (FLT) TECHNICAL CONTROL:
2.1.	PERFORMS TACTICAL COMMUNICATIONS PLANNING.
2.1.1.	REVIEWS/COORDINATES/BRIEFS TACTICAL COMM REQUIREMENTS.
2.1.2.	DEVELOPS COMPREHENSIVE MISSION ENGINEERING PLAN.
2.1.3.	ASSIGNS COMMAND COMMUNICATION SERVICE DESIGNATORS (CCSD) TO ALL CIRCUITS.
2.1.4.	COORDINATES AND DOCUMENTS MASTER STATION CABLE LAYOUT DIAGRAMS.
2.1.5.	DESIGNS AND VALIDATES ROUTER BASED NETWORK REQUIREMENTS.
2.1.6.	REQUESTS FREQUENCIES THROUGH HIGHER HEADQUARTERS.
2.1.7.	SUBMITS SATELLITE ACCESS FOR SUPER HIGH FREQUENCY (SHF) AND ULTRA HIGH FREQUENCY (UHF) SATELLITE OPERATIONS.



<b>TASK NO.</b>	<b>PROCESS</b>
2.1.8.	COORDINATES WITH INVOLVED AGENCIES. Coordinates with Defense Information Systems Agency (DISA) for Defense Communications Service (DCS) entry exercises. Coordinates Super High Frequency/Ground Mobile Forces (SHF/GMF) or High Frequency (HF)/Independent Side Band; SHF/GMF CON.
2.1.9.	INPUTS DATA AND CREATES PROPAGATION CHARTS FOR HF COMMUNICATIONS LINKS.
2.1.10.	INPUTS DATA AND CREATES PATH PROFILES FOR COMMUNICATIONS LINKS.
2.1.11.	CONDUCTS INTERMODULATION AND HARMONIC STUDIES FOR COMMUNICATIONS LINK.
2.1.12.	CREATES CONTINGENCY PROCEDURES.
2.1.13.	WRITES AND PUBLISHES UNIT TECHNICAL DATA PACKAGE (TDP) FOR COMMUNICATION EXERCISE.
2.1.14.	REVIEWS TECHNICAL DATA PACKAGE AND DISSEMINATES PLANS.
2.1.15.	PREPARES SYSTEMS CONTROL FACILITY (SYSCON) FOR COMMUNICATIONS SYSTEMS MONITORING.
2.2.	PERFORMS COMMUNICATIONS SITE SURVEY.
2.3.	COMMUNICATIONS OPERATIONS.
2.3.1.	MAINTAINS TECHNICAL CONTROL FACILITY.
2.3.2.	MONITORS CONFIGURATION AND INSTALLATION OF TACTICAL NETWORK.
2.3.3.	PERFORMS INSPECTION AND TRAINING OF FCC-100 TIME DIVISION MULTIPLEXER UNITS AND ASSOCIATED EQUIPMENT.
2.3.4.	PERFORMS OPERATIONAL CHECK TO VALIDATE PROGRAMMING OF FCC-100.
2.3.5.	IDENTIFIES AND CORRECTS NETWORK AND TRANSMISSION DEFICIENCIES IN PLANNED OR CURRENTLY OPERATIONAL NETWORKS.
2.3.6.	MANAGES PROGRAMMABLE MULTIPLEXERS.
2.3.7.	PROGRAMS ROUTERS FOR DATA COMMUNICATIONS CIRCUITS.

<b>TASK NO.</b>	<b>PROCESS</b>
2.3.8.	INSPECTS STRAPPING AND UTILIZATION OF CRYPTO DEVICES.
2.3.9.	UPDATES PROCEDURES FOR PROGRAMMING ASSIGNED EQUIPMENT.
2.3.10.	INSTALLS/TESTS SIGNAL CABLE ASSEMBLIES.
2.3.11.	COLLECTS NETWORK DATA TO ENSURE OPTIMAL PERFORMANCE.
2.3.12.	DIRECTS TELECOMMUNICATIONS MONITORING AND ASSESSMENT PROGRAM (TPAP).
2.4.	COMPILES/SUBMITS TACTICAL COMMUNICATIONS AFTER ACTIONS.
2.5.	PERFORMS DEPLOYMENT MANAGEMENT.
2.5.1.	COMPLETES DEPLOYMENT PLANNING AND PREPARATION.
2.5.2.	COMPLETES DEPLOYMENT EXECUTION.
2.5.3.	COMPLETES DEPLOYMENT RECOVERY.
3.	COMMAND TRAINING FLIGHT - INFORMATION ASSURANCE:
3.1.	PERFORMS COMPUTER SECURITY (COMPUSEC) MANAGER DUTIES.
3.1.1.	ESTABLISHES AND PUBLISHES POLICY TO MANAGE COMPUSEC PROGRAM.
3.1.2.	BRIEFS COMMANDER.
3.1.3.	PREPARES COMPUSEC TRAINING MATERIAL.
3.1.4.	REVIEWS CERTIFICATION AND ACCREDITATION PACKAGES.
3.1.5.	PERFORMS SIPRNET MANAGER TASKS.
3.2.	PERFORMS COMMUNICATIONS SECURITY (COMSEC) MANAGER DUTIES.
3.2.1.	ESTABLISHES AND PUBLISHES POLICY TO MANAGE COMSEC PROGRAM.
3.2.2.	BRIEFS COMMANDER.
3.2.3.	PREPARES COMSEC TRAINING MATERIAL.
3.2.4.	COMPLIES WITH ACCOUNT INSPECTION REQUIREMENTS.

<b>TASK NO.</b>	<b>PROCESS</b>
3.2.5.	MAINTAINS COMSEC RECORD.
3.2.6.	REVIEWS/MAINTAINS COMSEC EMERGENCY ACTION PROCEDURES (EAPS).
3.2.7.	REVIEWS COMSEC ACCOUNT REQUIREMENT.
3.2.8.	PERFORMS COMSEC OPERATION.
3.2.9.	RECEIVES COMSEC MATERIAL OR EQUIPMENT.
3.2.9.1.	MEETS DELIVERY AGENT.
3.2.9.2.	CHECKS DOCUMENT.
3.2.9.3.	ADDS MATERIAL TO INVENTORY.
3.2.9.4.	REPORTS DISCREPANCY IN SHIPMENT.
3.2.9.5.	TRANSFERS MATERIAL OR EQUIPMENT.
3.2.9.6.	ISSUES USER ACCOUNT'S MATERIAL/EQUIPMENT.
3.2.9.7.	ISSUES USER ACCOUNT'S MATERIAL/EQUIPMENT.
3.2.9.8.	MAINTAINS CRYPTOGRAPHIC ACCESS PROGRAM.
3.2.9.9.	MANAGES AIR FORCE ELECTRONIC KEY MANAGEMENT SYSTEM (AFEKMS).
3.3.	PERFORMS SECURE TELEPHONE UNIT- III (STU-III) / STE MANAGEMENT DUTIES.
3.3.1.	REVIEWS DOCUMENTATION, DISSEMINATES, AND MAINTAINS STE/STU-III INFORMATION FILE.
3.3.2.	ESTABLISHES STE/STU-III RESPONSIBLE OFFICER FOLDER.
3.3.3.	OBTAINS/RECEIVES STE/STU-III KEY.
3.3.4.	ISSUES CRYPTO IGNITION KEY (CIK)/STE/STU-III KEY.
3.3.5.	PREPARES STE/STU-III TRAINING MATERIAL.
3.4.	PERFORMS SATE MANAGER DUTIES.

<b>TASK NO.</b>	<b>PROCESS</b>
3.4.1.	PROVIDES SECURITY ASSISTANCE TO ORGANIZATION.
3.4.2.	ATTENDS SECURITY MANAGERS MEETINGS.
3.4.3.	BRIEFS COMMANDER.
3.4.4.	PREPARES MATERIAL FOR SATE TRAINING.
3.5.	MANAGES DEFENSE MESSAGING SYSTEM (DMS).
3.5.1.	UPDATES DMS SOFTWARE.
3.5.2.	DOCUMENTS AND REPORTS AFCERT/FENS UPDATES.
3.5.3.	PERFORMS FORTEZZA CONTROL OFFICER DUTIES.
3.5.4.	PREPARES MATERIAL FOR DMS TRAINING.
3.6.	DEPLOYMENT.
3.6.1.	DEPLOYMENT PLANNING.
3.6.2.	DEPLOYMENT EXECUTION.
3.6.3.	PERFORMS POST DEPLOYMENT TASKS.
4.	COMMAND TRAINING FLIGHT- NETWORK MANAGEMENT:
4.1.	DESIGNS LOCAL SERVER AND MANAGEMENT TERMINAL NETWORK.
4.2.	CONFIGURES LOCAL SERVER AND MANAGEMENT TERMINAL NETWORK.
4.3.	PROGRAMS LOCAL SERVER AND MANAGEMENT TERMINAL NETWORK.
4.4.	TROUBLESHOOTS LOCAL SERVER AND MANAGEMENT TERMINAL NETWORK.
4.5.	MANAGES LOCAL SERVER AND MANAGEMENT TERMINAL NETWORK.
4.6.	DEVELOPS CERTIFICATION AND ACCREDITATION PACKAGES.
4.7.	COMMERCIAL OFF-THE-SHELF (COTS) SUSTAINMENT FOR: CRYPTO INTERFACE MODULE (CIM), RED ROUTER MODULE (RRM), BASIC ACCESS MODULE (BAM), RED DATA MODULE (RDM), RED HUB MODULE (RHM), LARGE VOICE MODULE (LVM), CRYPTO MODULE, (CM), AND PREVENTIVE MAINTENANCE, (PM) THEATER DEPLOYABLE

<b>TASK NO.</b>	<b>PROCESS</b>
	COMMUNICATIONS (TDC) MODULES.
4.7.1.	PERFORMS COTS CONFIGURATION.
4.7.1.1.	CONFIGURES ALL MODULES AND DEVICES.
4.7.1.2.	INTERFACES ALL MODULES AND DEVICES.
4.7.1.3.	PROGRAMS ALL MODULES AND DEVICES.
4.7.1.4.	TROUBLESHOOTS AND REPORTS SYSTEM FAULTS.
4.7.1.5.	MANUALLY CONFIGURES AND PROGRAMS NRZ TO CDI MODEM.
4.7.1.6.	INSTALLS AND CONFIGURES THE LOCAL MANAGEMENT DEVICE (E.G., LAPTOP).
4.8.	MAINTAINS SERVER.
4.8.1.	CONFIGURES AND MANAGES SERVERS FOR UNCLASSIFIED NETWORKS.
4.8.2.	CONFIGURES AND MANAGES INTRANET SERVER.
4.8.3.	CONFIGURES AND MANAGES REMOTE MANAGEMENT TERMINALS USING VARIOUS SOFTWARE TOOLS. HAND PHONE (HP) OPEN VIEW, COMPUTER INFORMATION SYSTEM COMPANY (CISCO) WORKS, AND OTHER AVAILABLE NETWORK CONFIGURATION TOOLS.
4.8.4.	CONFIGURES AND MANAGES TROUBLE-TICKETING SERVERS AND SOFTWARE TO INCLUDE REMEDY SERVER AND REMEDY CLIENT.
4.8.5.	CONFIGURES AND MANAGES PROXY SERVERS, DOMAIN NAMING SERVERS (DNS) AND NETWORK TIME PROTOCOL SERVERS.
4.8.6.	CONFIGURES AND MANAGES SERVERS FOR CLASSIFIED NETWORKS.
4.8.7.	TESTS OPERATION AND COMPATIBILITY OF ASSIGNED PUBLIC KEY INFRASTRUCTURE (PKI) DEVICES.
4.8.8.	UPDATES ASSIGNED PUBLIC KEY INFRASTRUCTURE (PKI) DEVICES.
4.9.	SECURE SYSTEMS AND SECURITY PROGRAMS.
4.9.1.	MANAGES FIXED AND TACTICAL MESSAGING PLATFORMS.
4.9.2.	IMPLEMENTS MINIMIZE PROCEDURES.

<b>TASK NO.</b>	<b>PROCESS</b>
4.9.3.	PERFORMS CRYPTO SECURITY KEY-CHANGE.
4.9.4.	MAINTAINS/UPDATES MAIL LISTS.
4.9.5.	PERFORMS SERVER HARD DRIVE SCAN AND COMPRESSION.
4.9.6.	MAINTAINS SECURITY OF CONTROLLED ACCESS AREA.
4.9.7.	MAINTAINS FIELD ENGINEERING NOTES (FENS).
4.10.	MANAGES VOICE NETWORK.
4.10.1.	INSTALLS, OPERATES, AND MAINTAINS FIXED AND TACTICAL TELEPHONE SYSTEM NETWORKS.
4.10.2.	UPDATES TELEPHONE DIRECTORIES.
4.10.3.	TROUBLESHOOTS TELEPHONE TROUBLE CALLS.
4.10.4.	MAINTAINS VOICE MAIL SYSTEM.
4.10.5.	COORDINATES VOICE NETWORK STATUS WITH HOST BASE.
4.11.	MAINTAINS EQUIPMENT MANAGEMENT AND ACCOUNTABILITY.
4.11.1.	MAINTAINS AUTOMATED DATA PROCESSING EQUIPMENT (ADPE), FIXED AND DEPLOYABLE.
4.11.2.	MANAGES CA/CRL ACCOUNTS.
4.12.	PERFORMS DEPLOYMENT ACTIONS.
4.12.1.	COMPLETES DEPLOYMENT PLANNING.
4.12.2.	COMPLETES DEPLOYMENT EXECUTION.
4.12.3.	PERFORMS POST DEPLOYMENT TASKS.
4.13.	PREPARES MATERIAL FOR DRILL STATUS GUARDSMAN (DSG) DMS/NETWORK TRAINING.
5.	UTA Preparation.
6.	INDIRECT. Indirect work involves those tasks that are not readily identifiable with the work center's specific product or service. The major categories of standard indirect work are: Administers Civilian, Officer, and Enlisted Personnel; Directs Work Center Activity; Provides Administrative Support; Prepares for and Conducts/Attends Meeting; Administers Training; Manages Supplies; Maintains Equipment; and Performs Cleanup.



## Attachment 3

## MANPOWER TABLE

Table A3.1. Standard Manpower Table.

WORK CENTER Mission Support Flight /FAC 38B100CB		APPLICABILITY MAN-HOUR RANGE 424.50 – 714.32					
Air Force Specialty Title	AFSC	Grade	Manpower Requirement				
Supervisory Informational Technology Specialist	033SX/3C000	CIV	1	1	1		
Informational Technology Specialist (INFOSEC)	3C0X1	CIV	0	1	1		
Informational Technology Specialist (NETWORK)	3C0X1	CIV	1	1	2		
Informational Technology Specialist (SYS-AD)	3C0X1	CIV	1	1	1		
Total			3	4	5		

**NOTE.** AFSCs may be adjusted at the discretion of the CBCS Commander.